Please cancel Claims 38 to 54 without prejudice or disclaimer of subject matter. Please add new Claims 75 to 77 and amend Claims 1, 19, 37, 55, 73 and 74 as follows. The claims, as pending in the subject application, read as follows:

1. (Currently Amended) A method for adjusting the representation of a device's color gamut in color appearance space, comprising the steps of:

performing forward mapping of sample colors from a device-dependent color space to a device-independent color appearance space to obtain forward-mapped device-independent values;

obtaining mismatch values for perceived device-neutrals which are perceived as being neutral by a human being, each mismatch value being a difference between a forward mapped value for the device-neutral and a neutral axis of the device-independent color appearance space; and

adjusting each forward-mapped device-independent color appearance space value by utilizing the obtained mismatch value for each corresponding lightness level of device-neutrals in order to obtain an adjusted forward mapping,

wherein the device-independent color appearance space, taking into account viewing conditions, defines color coordinates that attempt to describe how colors appear to a viewer.

2. (Original) A method according to Claim 1, wherein the forward mapping is a forward look-up table obtained by converting measurements of color samples from the device to device-independent color appearance space.

3. (Original) A method according to Claim 1, wherein mismatch values are obtained by extracting device-independent color appearance space values for device-neutrals and generating a one-dimensional look-up table that maps a color-neutral axis for a range of lightness values.

4. (Original) A method according to Claim 1, wherein the device-independent values are Jab values.

5. (Original) A method according to Claim 1, wherein the adjustment of each device-independent value comprises obtaining "a" and "b" coordinates for a device-neutral having a lightness value equivalent to the device-independent value, and subtracting the "a" coordinate of the device-neutral from a corresponding "a" coordinate of the device-independent value and the "b" coordinate of the device-neutral from a corresponding "b" coordinate of the device-independent value.

6. (Original) A method according to Claim 1, wherein the adjustment of each device-independent value comprises obtaining "a" and "b" coordinates for a device-neutral having a lightness value equivalent to the device-independent value, and adjusting the "a" and "b" values by means of a linear or non-linear function of the device-neutral "a" and "b" values.

7. (Original) A method according to Claim 1 further comprising the step of inverting the resulting adjusted forward mapping from device-independent color appearance space to device-dependent space.

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8. (Original) A method according to Claim 7, wherein the adjusted forward-mapping and the inverted adjusted forward-mapping are inserted into a color management module.

9. (Original) A method according to Claim 8, wherein a computing device utilizes the color management module to perform color data management to output an image.

10. (Original) A method according to Claim 1, wherein the adjusting of the forward-mapped device-independent values is a full adjustment of each value.

11. (Original) A method according to Claim 1, wherein the adjusting of the forward-mapped device-independent values is a partial adjustment performed in either a linear or non-linear manner.

12. (Original) A method according to Claim 11, wherein the partial adjustment is based at least in part on chroma.

13. (Original) A method according to Claim 12, wherein the partial adjustment is performed in inverse proportionality.

14. (Original) A method according to Claim 11, wherein the partial adjustment is based at least in part on lightness.

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15. (Original) A method according to Claim 14, wherein the partial adjustment is performed in inverse proportionality.

16. (Original) A method according to Claim 11, wherein the partial adjustment is based at least in part on both chroma and lightness.

17. (Original) A method according to Claim 16, wherein the partial adjustment based on chroma is performed in inverse proportionality, and the partial adjustment based on lightness is performed in inverse proportionality.

18. (Original) A method according to Claim 1, wherein the mismatch values are obtained for two device-neutrals with any remaining values being obtained by interpolation.

19. (Currently Amended) Computer-executable process steps for adjusting the representation of a device's color gamut in color appearance space, comprising the steps of:

performing forward mapping of sample colors from a device-dependent color space to a device-independent color appearance space to obtain forward-mapped device-independent values;

obtaining mismatch values for perceived device-neutrals which are perceived as being neutral by a human being, each mismatch value being a difference between a forward mapped value for the device-neutral and a neutral axis of the device-independent color appearance space; and

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adjusting each forward-mapped device-independent <u>color appearance space</u> value by utilizing the obtained mismatch value for each corresponding lightness level of device-neutrals in order to obtain an adjusted forward mapping,

<u>wherein the device-independent color appearance space, taking into account viewing conditions, defines color coordinates that attempt to describe how colors appear to a viewer.</u>

20. (Original) Computer-executable process steps according to Claim 19, wherein the forward mapping is a forward look-up table obtained by converting measurements of color samples from the device to device-independent color appearance space.

21. (Original) Computer-executable process steps according to Claim 19, wherein mismatch values are obtained by extracting device-independent color appearance space values for device-neutrals and generating a one-dimensional look-up table that maps a color-neutral axis for a range of lightness values.

22. (Original) Computer-executable process steps according to Claim 19, wherein the device-independent values are Jab values.

23. (Original) Computer-executable process steps according to Claim 19, wherein the adjustment of each device-independent value comprises obtaining "a" and "b" coordinates for a device-neutral having a lightness value equivalent to the device-independent value, and subtracting the "a" coordinate of the device-neutral from a

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corresponding "a" coordinate of the device-independent value and the "b" coordinate of the

device-neutral from a corresponding "b" coordinate of the device-independent value.

24. (Original) Computer-executable process steps according to Claim 19,

wherein the adjustment of each device-independent value comprises obtaining "a" and "b"

coordinates for a device-neutral having a lightness value equivalent to the device-

independent value, and adjusting the "a" and "b" values by means of a linear or non-linear

function of the device-neutral "a" and "b" values.

25. (Original) Computer-executable process steps according to Claim 19

further comprising the step of inverting the resulting adjusted forward mapping from

device-independent color appearance space to device-dependent space.

26. (Original) Computer-executable process steps according to Claim 25

wherein the adjusted forward-mapping and the inverted adjusted forward-mapping are

inserted into a color management module.

27. (Original) Computer-executable process steps according to Claim 26,

wherein a computing device utilizes the color management module to perform color data

management to output an image.

28. (Original) Computer-executable process steps according to Claim 19,

wherein the adjusting of the forward-mapped device-independent values is a full

adjustment of each value.

29. (Original) Computer-executable process steps according to Claim 19, wherein the adjusting of the forward-mapped device-independent values is a partial adjustment performed in either a linear or non-linear manner.

30. (Original) Computer-executable process steps according to Claim 29, wherein the partial adjustment is based at least in part on chroma.

31. (Original) Computer-executable process steps according to Claim 30, wherein the partial adjustment is performed in inverse proportionality.

32. (Original) Computer-executable process steps according to Claim 29, wherein the partial adjustment is based at least in part on lightness.

33. (Original) Computer-executable process steps according to Claim 32, wherein the partial adjustment is performed in inverse proportionality.

34. (Original) Computer-executable process steps according to Claim 29, wherein the partial adjustment is based at least in part on both chroma and lightness.

35. (Original) Computer-executable process steps according to Claim 34, wherein the partial adjustment based on chroma is performed in inverse proportionality, and the partial adjustment based on lightness is performed in inverse proportionality.

36. (Original) Computer-executable process steps according to Claim 19, wherein the mismatch values are obtained for two device-neutrals with any remaining values being obtained by interpolation.

37. (Currently Amended) An apparatus that processes color image data, comprising:

a program memory for storing executable process steps for adjusting the representation of a device's color gamut in color appearance space, wherein the executable process steps ~~include~~ comprise: (a) performing forward mapping of sample colors from a device-dependent color space to a device-independent color appearance space to obtain forward-mapped device-independent values; (b) obtaining mismatch values for perceived device-neutrals which are perceived as being neutral by a human being, each mismatch value being a difference between a forward mapped value for the device-neutral and a neutral axis of the device-independent color appearance space; and (c) adjusting each forward-mapped device-independent color appearance space value by utilizing the obtained mismatch value for each corresponding lightness level of device-neutrals in order to obtain an adjusted forward mapping, wherein the device-independent color appearance space, taking into account viewing conditions, defines color coordinates that attempt to describe how colors appear to a viewer; and

a processor for executing the process steps stored in the program memory.

38. to 54. (Canceled)

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55. (Currently Amended) A computer-readable medium on which is stored code for performing computer-executable process steps for adjusting the representation of a device's color gamut in color appearance space, wherein the computer-executable process steps ~~include~~ comprise: (a) performing forward mapping of sample colors from a device-dependent color space to a device-independent color appearance space to obtain forward-mapped device-independent values; (b) obtaining mismatch values for perceived device-neutrals which are perceived as being neutral by a human being, each mismatch value being a difference between a forward mapped value for the device-neutral and a neutral axis of the device-independent color appearance space; and (c) adjusting each forward-mapped device-independent color appearance space value by utilizing the obtained mismatch value for each corresponding lightness level of device-neutrals in order to obtain an adjusted forward mapping, wherein the device-independent color appearance space, taking into account viewing conditions, defines color coordinates that attempt to describe how colors appear to a viewer.

56. (Original) A computer-readable medium according to Claim 55, wherein the forward mapping is a forward look-up table obtained by converting measurements of color samples from the device to device-independent color appearance space.

57. (Original) A computer-readable medium according to Claim 55, wherein mismatch values are obtained by extracting device-independent color appearance space values for device-neutrals and generating a one-dimensional look-up table that maps a color-neutral axis for a range of lightness values.

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58. (Original) A computer-readable medium according to Claim 56, wherein the device-independent values are Jab values.

59. (Original) A computer-readable medium according to Claim 56, wherein the adjustment of each device-independent value comprises obtaining "a" and "b" coordinates for a device-neutral having a lightness value equivalent to the device-independent value, and subtracting the "a" coordinate of the device-neutral from a corresponding "a" coordinate of the device-independent value and the "b" coordinate of the device-neutral from a corresponding "b" coordinate of the device-independent value.

60. (Original) A computer-readable medium according to Claim 56, wherein the adjustment of each device-independent value comprises obtaining "a" and "b" coordinates for a device-neutral having a lightness value equivalent to the device-independent value, and adjusting the "a" and "b" values by means of a linear or non-linear function of the device-neutral "a" and "b" values.

61. (Original) A computer-readable medium according to Claim 56 further comprising the step of inverting the resulting adjusted forward mapping from device-independent color appearance space to device-dependent space.

62. (Original) A computer-readable medium according to Claim 61 wherein the adjusted forward-mapping and the inverted adjusted forward-mapping are inserted into a color management module.

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63. (Original) A computer-readable medium according to Claim 62, wherein a computing device utilizes the color management module to perform color data management to output an image.

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64. (Original) A computer-readable medium according to Claim 56, wherein the adjusting of the forward-mapped device-independent values is a full adjustment of each value.

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65. (Original) A computer-readable medium according to Claim 56, wherein the adjusting of the forward-mapped device-independent values is a partial adjustment performed in either a linear or non-linear manner.

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66. (Original) A computer-readable medium according to Claim 65, wherein the partial adjustment is based at least in part on chroma.

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67. (Original) A computer-readable medium according to Claim 66, wherein the partial adjustment is performed in inverse proportionality.

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68. (Original) A computer-readable medium according to Claim 66, wherein the partial adjustment is based at least in part on lightness.

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69. (Original) A computer-readable medium according to Claim 68, wherein the partial adjustment is performed in inverse proportionality.

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70. (Original) A computer-readable medium according to Claim 68, wherein the partial adjustment is based at least in part on both chroma and lightness.

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71. (Original) A computer-readable medium according to Claim 53, wherein the partial adjustment based on chroma is performed in inverse proportionality, and the partial adjustment based on lightness is performed in inverse proportionality.

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72. (Original) A computer-readable medium according to Claim 38, wherein the mismatch values are obtained for two device-neutrals with any remaining values being obtained by interpolation.

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73. (Currently Amended) An image processing method, comprising the steps of:

transforming a color measurement value to a device-independent color appearance space value;

generating a forward mapping model by using the transformed device-independent color appearance space value;

selecting a neutral color in the forward mapping model and adjusting the forward mapping model based on a difference between a device-independent color appearance space value of the selected neutral color and a neutral axis; and

inverting the adjusted forward mapping model and generating an inverted forward mapping model, the inverted forward mapping model transforming a device-independent color appearance space value into a device dependent value,

wherein the device-independent color appearance space, taking into account viewing conditions, defines color coordinates that attempt to describe how colors appear to a viewer.

74. (Currently Amended) A memory medium storing processing computer-executable process steps for an image processing method, the process steps comprising the steps of:

transforming a color measurement value to a device-independent color appearance space value;

generating a forward mapping model by using the transformed device-independent color appearance space value;

selecting a neutral color in the forward mapping model and adjusting the forward mapping model based on a difference between a device-independent color appearance space value of the selected neutral color and a neutral axis; and

inverting the adjusted forward mapping model and generating an inverted forward mapping model, the inverted forward mapping model transforming a device-independent color appearance space value into a device dependent value,

wherein the device-independent color appearance space, taking into account viewing conditions, defines color coordinates that attempt to describe how colors appear to a viewer.

75. (New) An image processing method, comprising the steps of:

transforming a color measurement value to a device-independent color appearance space value;

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generating a forward mapping model by using the transformed device-independent color appearance space value;

selecting neutral colors in the forward mapping model;

generating an adjustment value for each color value based on a difference between a device-independent color appearance space value of the selected neutral colors and a color neutral axis; and

adjusting the forward-mapped device-independent value based on the adjustment value corresponding to the color value for the forward-mapped device-independent value,

wherein the device-independent color appearance space defines color coordinates that attempt to describe how colors appear to a viewer, taking into account viewing conditions.

76. (New) An image processing method according to Claim 75, wherein the selected neutral colors include white, dark and plural grays.

77. (New) A computer-readable medium on which are stored computer-executable process steps for performing an image processing method, the executable process steps comprising the steps of:

transforming a color measurement value to a device-independent color appearance space value;

generating a forward mapping model by using the transformed device-independent color appearance space value;

selecting neutral colors in the forward mapping model;

generating an adjustment value for each color value based on a difference

between a device-independent color appearance space value of the selected neutral colors

and a color neutral axis; and

adjusting the forward-mapped device-independent value based on the

adjustment value corresponding to the color value for the forward-mapped device-

independent value,

wherein the device-independent color appearance space defines color

coordinates that attempt to describe how colors appear to a viewer, taking into account

viewing conditions.

78. (New) A computer-readable medium according to Claim 77, wherein

the selected neutral colors include white, dark and plural grays.